

WHAT IS CLAIMED IS:

1 1. A display device including a display section for displaying a video signal,
2 comprising:

3 an on-screen display generating section for generating a menu matrix having a plurality of
4 menu icons arranged in a plurality of rows and columns on the display section, the plurality of menu
5 icons being individually selectable for enabling a user to adjust a display state of the display section;

6 a key inputting section adapted to allow a user to select any desired one of the plurality of
7 menu icons; and

8 a control section adapted to control a pointer so that the pointer is initially positioned at a
9 menu icon in the central region of the menu matrix upon the initial display of the menu matrix, the
10 pointer indicating a menu icon selected through the key inputting section.

1 2. The display device as set forth in claim 1, wherein said control section controls the
2 adjustment of the display state of the display section according to an input signal from the key
3 inputting section.

1 3. The display device as set forth in claim 1, wherein the plurality of rows of the menu
2 matrix includes at least three rows.

1 4. The display device as set forth in claim 2, wherein the control section determines the
2 frequency of use for each of the menu icons selected by a user via the key inputting section, and

3 disposes the menu icon having the highest frequency of use at the central region of the menu matrix
4 where the pointer is initially positioned.

1 5. The display device as set forth in claim 4, wherein the control section disposes the
2 remaining menu icons around the central region of the menu matrix so that those of the menu icons
3 having higher frequencies of use are arranged closer to the central region of the menu matrix than
4 those of the menu icons having lower frequencies of use.

1 6. The display device as set forth in claim 5, wherein the control section disposes the
2 four menu icons having the frequencies of use closest in frequency to the menu icon having the
3 highest frequency of use adjacent to said menu icon having the highest frequency of use in an order
4 of right, top, left and bottom sides of said menu icon having the highest frequency of use.

1 7. The display device as set forth in claim 1, wherein said key inputting section
2 comprises a plurality of directional keys, and each menu icon is reachable from said menu icon in
3 the central region of the menu matrix through a corresponding predetermined number of incremental
4 steps in response to the user's manipulation of said directional keys, those menu icons farthest away,
5 geometrically, from said menu icon in the central region of the menu matrix requiring the most
6 amount of incremental steps to be reached.

1 8. The display device as set forth in claim 7, wherein said control section moves said
2 pointer from one of the rightmost menu icons to a predetermined menu icon requiring one less

3 incremental step than the number of incremental steps corresponding to said one of the rightmost
4 menu icons, when said control section moves the pointer in a right direction from said one of the
5 rightmost menu icons, said predetermined menu icon being disposed on a left side of said menu
6 matrix with respect to said menu icon in the central region of the menu matrix and in a row adjacent,
7 in a downward looped direction, to the row in which said one of the rightmost menu icons was
8 disposed.

1 9. The display device as set forth in claim 7, wherein said control section moves said
2 pointer from one of the leftmost menu icons to a predetermined menu icon requiring one less
3 incremental step than the number of incremental steps corresponding to said one of the leftmost
4 menu icons, when said control section moves the pointer in a left direction from said one of the
5 leftmost menu icons, said predetermined menu icon being disposed on a right side of said menu
6 matrix with respect to said menu icon in the central region of the menu matrix and in a row adjacent,
7 in an upward looped direction, to the row in which said one of the leftmost menu icons was disposed.

1 10. The display device as set forth in claim 7, wherein said control section moves said
2 pointer from a top rightmost menu icon to a predetermined menu icon requiring one less incremental
3 step than the number of incremental steps corresponding to said top rightmost menu icon, when said
4 control section moves the pointer in a right direction or upward direction from said top rightmost
5 menu icon, said predetermined menu icon being disposed on a left side of said menu matrix with
6 respect to said menu icon in the central region of the menu matrix and in a row downwardly adjacent
7 to the row in which said top rightmost menu icon was disposed.

11. The display device as set forth in claim 7, wherein said control section moves said pointer from a bottom rightmost menu icon to a predetermined menu icon requiring one less incremental step than the number of incremental steps corresponding to said bottom rightmost menu icon, when said control section moves the pointer in a right direction or downward direction from said bottom rightmost menu icon, said predetermined menu icon being disposed on a left side of said menu matrix with respect to said menu icon in the central region of the menu matrix and in a top row of the menu matrix.

12. The display device as set forth in claim 7, wherein said control section moves said pointer from a top leftmost menu icon to a predetermined menu icon requiring one less incremental step than the number of incremental steps corresponding to said top leftmost menu icon, when said control section moves the pointer in a left direction or upward direction from said top leftmost menu icon, said predetermined menu icon being disposed on a right side of said menu matrix with respect to said menu icon in the central region of the menu matrix and in a bottom row of the menu matrix.

13. The display device as set forth in claim 7, wherein said control section moves said pointer from a bottom leftmost menu icon to a predetermined menu icon requiring one less incremental step than the number of incremental steps corresponding to said bottom leftmost menu icon, when said control section moves the pointer in a left direction or downward direction from said bottom leftmost menu icon, said predetermined menu icon being disposed on a right side of said menu matrix with respect to said menu icon in the central region of the menu matrix and in a row

upwardly adjacent to the row in which said bottom leftmost menu icon was disposed.

14. An on-screen display controlling method of a display device including a display section for displaying a video signal, comprising the steps of:

generating an on-screen display including a menu matrix having a plurality of menu icons arranged in a plurality of rows and columns, said plurality of menu icons being individually selectable for enabling a user to adjust a display state of the display section;

generating a pointer for indicating which of said plurality of menu icons is currently selected;

and

controlling said pointer so that said pointer is initially positioned at a default menu icon in the central region of the menu matrix when said menu matrix is initially displayed.

15. The on-screen display controlling method as set forth in claim 14, wherein said menu matrix includes at least three rows.

16. The on-screen display controlling method as set forth in claim 15 further comprising the steps of:

determining the frequency of use of each of the menu icons selected by a user to adjust a display state; and

setting the menu icon having the highest frequency of use as said default menu icon.

17. The on-screen display controlling method as set forth in claim 16 further comprising

2 the step of disposing the remaining menu icons around the central region of the menu matrix so that
3 those of the menu icons having higher frequencies of use are arranged closer to the default menu
4 icon than those of the menu icons having lower frequencies of use, such that the four menu icons
5 having the frequencies of use closest in frequency to the frequency of use of the default menu icon
6 are disposed, in order of frequency of use, to be adjacent to said default menu icon in an order of
7 right, top, left and bottom sides of said default menu icon.

1 18. The on-screen display controlling method as set forth in claim 17 further comprising
2 the step of:

3 selecting one or more of a plurality of directional keys in a key inputting section of said
4 display device to move the pointer from said default menu icon to any of the remaining menu icons
5 in said menu matrix, wherein each said remaining menu icon is reachable from said default menu
6 icon through a corresponding predetermined number of incremental steps in response to the user's
7 manipulation of said directional keys, those menu icons farthest away, geometrically, from said
8 default menu icon requiring the most amount of incremental steps to be reached.

1 19. The on-screen display controlling method as set forth in claim 18 further comprising
2 the step of:

3 selecting a right directional key in said key inputting section of said display device to move
4 the pointer from one of the rightmost menu icons in a right direction; and

5 controlling said pointer to move from said one of the rightmost menu icons to a
6 predetermined menu icon requiring one less incremental step than the number of incremental steps

7 corresponding to said one of the rightmost menu icons, in response to the step of selecting a right
8 directional key, said predetermined menu icon being disposed on a left side of said menu matrix with
9 respect to said default menu icon and in a row adjacent, in a downward looped direction, to the row
10 in which said one of the rightmost menu icons was disposed.

1 20. The on-screen display controlling method as set forth in claim 18 further comprising
2 the step of:

3 selecting a left directional key in said key inputting section of said display device to move
4 the pointer from one of the leftmost menu icons in a left direction; and

5 controlling said pointer to move from said one of the leftmost menu icons to a predetermined
6 menu icon requiring one less incremental step than the number of incremental steps corresponding
7 to said one of the leftmost menu icons, in response to the step of selecting a left directional key, said
8 predetermined menu icon being disposed on a right side of said menu matrix with respect to said
9 default menu icon and in a row adjacent, in an upward looped direction, to the row in which said one
10 of the leftmost menu icons was disposed.